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The Need for Uniform End User Numbering: A Request for Assistance to the North American Numbering Council

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Request: A Uniform Numbering Scheme for VRS Users and Providers

Video Relay Services (VRS) enable individuals who use American sign language to communicate via the Internet through remote sign language interpreters and video equipment installed at their premises. The individual user logs onto a VRS website, which then connects the user to an interpreter who, in turn, connects the calling party to his destination. Once the calling party and called party are connected, the two converse naturally through the interpreter, with the interpreter speaking everything that the calling party signs and then signing back to that party the called party's responses. VRS is authorized by the Americans with Disabilities Act, and in 2000, was approved by the FCC for compensation from the National Carriers Exchange Administration. Over the past several years, VRS usage has grown enormously: currently, VRS providers handle over 2 million minutes of calls each month.

Video relay services offer telephone-like communications for deaf people that are truly functionally equivalent to voice telephone services. Unlike text-based relay services, which can be slow and cumbersome, VRS allows naturally-flowing, real time conversations that mirror the speed and style of voice-to-voice conversations. Specifically, VRS allows users of sign language to converse comfortably, using emotional context, voice inflection and other non-verbal information not easily conveyed through text. Also, because VRS is in real time, it allows callers to participate in conference calls and effectively use telephone systems that have interactive menus.

Unlike the voice telephone network, however, VRS users are presently not linked to a uniform numbering scheme. In other words, there is no consistent way for users of these services to identify and access other users in a manner that compares with callers whose end-user contact information is linked to the North American Numbering Plan (NANP). Instead, there are several identifications systems used by the existing eight VRS providers, forcing VRS users to list multiple ways of receiving VRS calls if they

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want return calls back from hearing individuals. The resulting complex and confusing arrangement discourages calls from hearing persons, who

must have specific provider information and extensions in order for their calls to be properly routed to all their deaf contacts.

This situation is complicated even further by the fact that at least one VRS provider uses an LDAP ("Lightweight Directory Access Protocol") that is closed to other providers. Specifically, that provider uses a unique VRS identifier in the form of a telephone number – often identical to the individual's voice telephone number, though this time not linked to the NANP. This "telephone number" is then cross-referenced to the deaf user's dynamic (and ever-changing) IP address through the LDAP. The provider's video equipment automatically and periodically registers with a unique network server to update the IP address information of its users. However, in the instance of this provider, even where a hearing party has the correct unique indentifier (or the telephone number) assigned to the deaf VRS user, the hearing person still is not able to establish contact with that individual through a competing provider because the LDAP blocks access to other providers. Thus, if the hearing individual makes the VRS call through a VRS competitor, that competitor has no way to cross-reference the unique identifier to the deaf user's dynamic IP address, and the call cannot go through.

The negative consequences of this arrangement – and the general failure to have a uniform VRS numbering scheme – can be seen in VRS call volumes. Although VRS usage by deaf and hard of hearing individuals has soared over the past two years, calls from hearing people to deaf VRS users have hardly risen, and presently account for scarcely 1-2% of all VRS minutes. The lack of a nationwide VRS numbering system also creates considerable problems for peer-to-peer video users, who are without a consistent and uniform means of calling one another.

Both NANPA and the FCC once before addressed the need for uniform numbering for relay users. Specifically, in the mid-1990s, careful consideration was given to the use of 711 as a ubiquitous relay access number, following a petition for rulemaking on this subject by national deaf organizations. When, in July of 2000, the FCC finally mandated the use of 711 for nationwide relay services, the rewards were swift: after several years of being stagnant, relay call volumes in a number of states increased dramatically, with substantial increases in calls initiated by hearing individuals. Now, rather than requesting a single access number, we are simply seeking a way for VRS users to have what all PSTN voice users already have and what VoIP users are now obtaining – the ability to have a single telephone number or end user identifier that enables all calls to always go through to any VRS or video user, regardless of the provider or equipment used. It is also worth noting that in order for 711 relay access to become a functional part of VRS, there needs to be a single method of interconnecting VRS users. This is because 711 callers need to be able to give communications assistants who answer 711 calls the telephone number or identifier for the party being called (if there is no common identifier, then a communications assistant working for company A would not be able to complete a call to an individual using equipment from company B.)

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When Congress enacted the ADA, it intended for relay services to be a tool to foster the independence and integration of deaf and hard of hearing individuals. While telecommunications relay services and VRS have gone a long way toward achieving this goal, when a VRS user calls an employer or a doctor who is unavailable, the caller has little assurance

that he will get his called returned via VRS because of the numbering difficulties just described. The ADA's objective to fully mainstream all individuals with disabilities throughout American society cannot be realized until VRS users can be confident that their calls will be returned.

Just last month, the FCC noted the importance of ensuring the fair and efficient administration of our nation's numbering resources. In its public notice renewing NANC's charter, the Commission explained that "[t]elephone numbers are the means by which consumers gain access to, and reap the benefits of, the public switched telephone network." For deaf people using the "VRS network" or point to point video communications over the Internet, this access remains severely limited. A seamless numbering scheme that allows all VRS users – deaf and hearing – to contact each other and receive calls with the same ease that PSTN and VoIP users have is needed to achieve the level of functional equivalency sought by the ADA's drafters (as well as by the drafters of Section 255 of the Communications Act) . This is especially important in emergency situations, where PSAP personnel need an effective means of calling back individuals in the event incoming calls are disconnected. Indeed, recent FCC directives for interconnected VoIP providers *require* such providers to have customer call back numbers.

Request for NANC's Assistance for a uniform VRS numbering scheme

In summary, currently, there is no uniform means of "dialing" a video user across providers. Although VRS users have IP addresses, these are dynamic – because they are constantly changing, they are unreliable for making routine or emergency calls. Static IP addresses are expensive and often unavailable to residential users. In order for VRS to be functionally equivalent to voice telephone services, deaf and hard of hearing individuals using video broadband communication need uniform and static end-point numbers linked to the NANP that will remain consistent across all VRS providers, so that they can contact one another and be contacted, to the same extent that PSTN and VoIP users are able to identify and call one another. We request that NANC support dialing uniformity for VRS and point-to-point video users and believe that this request falls squarely within the following policy objectives, as stated in the Council's Charter:

- to ensure that the NANP facilitates entry into the communications marketplace by making numbering resources available on an efficient, timely basis to communications service providers;
- to ensure that the NANP does not unduly favor or disfavor any particular industry segment or group of consumers;
- to ensure that the NANP does not unduly favor one technology over another; and
- to ensure that the NANP gives consumers easy access to the public switched telephone network (and in this case, its broadband successor).